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## Corrigendum to “An exact dynamic stiffness method for multibody systems consisting of beams and rigid-bodies, Mechanical Systems and Signal Processing 150 (2021) 107264, by X. Liu, Ch. Sun, J.R. Banerjee, H-Ch. Dan, L. Chang”

The authors are grateful to Professor Salinic and his colleagues [1] for their comments in pointing out some typographical and other errors in [2] which are regretted. Consequent on the comments made in [1] a corrigendum to [2] is now provided.

In Section 3.1 of [2], there are typographical errors that need to be corrected. First, the size parameters of the rigid body element given in the last line of page 11 should be corrected and read as  $\Delta y_1 = \Delta y_2 = 0.2m$  and secondly, on the same line, the dimensionless frequency parameter should be corrected to  $\lambda_i = \sqrt[4]{\omega_i^2 \rho A L^4 / EI}$ . Also, in the light of the comments made in [1], Table 2 of [2] should read as follows.

It can be clearly seen from Table 1 above that the results computed by the proposed DS method of Ref. [2] and those by the transfer matrix method (TMM) of Ref. [3] match very well with those using the finite element method (FEM) when a much refined mesh is used. The relative errors between the results computed by the theory in [2] and those by the FEM are within 0.05% whilst the relative error between the TMM and the FEM is above 0.25% for the second and third natural frequencies, as shown in the table.

Finally,  $a_2 = \frac{EA}{l} \mu c s c \mu$  in Eq. (30) of Ref. [2] should be replaced by  $a_2 = -\frac{EA}{l} \mu c s c \mu$ , as the sign error has been correctly pointed out by the authors of [1].

**Table 1**

Comparison on the results computed by the present method, the transfer matrix method [3] as well as the finite element method (FEM).

Mode	Present theory	TMM [3]	FEM	Rel. Err. (TMM [3] vs FEM)	Rel. Err. (Present vs FEM)
1	2.81010	2.81093	2.80887	0.07%	0.04%
2	4.67611	4.68603	4.67394	0.26%	0.05%
3	6.97823	6.99522	6.97575	0.28%	0.04%

## Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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